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Who is Really in Charge of Contemporary Education? People and technologies in, against and beyond the neoliberal university

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Abstract

This article reflects on the position of people in, against and beyond information and communication technologies. Firstly, using Jandrić and Kuzmanić's work on digital postcolonialism, Raymond Williams's work on residual and emergent cultures, and Deleuze and Guattari's insights into the dynamics between territorialization, de-territorialization and re-territorialization, it develops a theoretical framework for inquiry into the hybrid identity of the contemporary university. Then, through critical discourse analysis (CDA), the article moves on to analyse the ways in which technology discourse resides in the dominating ideology of technological determinism and co-opts with neoliberal agendas by omitting humans from explicit mention in UK policy documents. It shows that true counter-hegemonic practice against dominating social practices is possible only through reinvigorating the central position of human beings in regards to information and communication technologies. Within the developed theoretical framework, it seeks openings to intervene subversively into current relationships between technologies, people, and (higher) education, and to identify opportunities for building a non-determinist identity of the contemporary university that reaches beyond the single-minded logic of techno-scientific development. In the process, it situates Paulo Freire's insights into critical pedagogy in the context of the network society, and places the relationships between human beings, language and information and communication technologies amongst central questions of today's (higher) education and society at large.

Keywords: technology enhanced learning, e-learning, critical discourse analysis, CDA, in against and beyond, neoliberal university

Introduction

Inventions usually arrive into being in order to resolve well-defined problems. The plough was invented in order to yield more crops, the automobile was invented in order to enable independent travel over large distances, and ‘every good work of software starts by scratching a developer’s personal itch’ (Raymond, 1999, p. 3). However, technical solutions to simple problems tend to bring about complex social changes. The plough domesticated hunters and gatherers into farmers, automobiles created (sub)urban lifestyles, and computers brought ubiquitous access to information and communication. In *To Save Everything, Click Here: The Folly of Technological Solutionism* (2013), Evgeny Morozov shows that whilst we often think of changes brought by the advent of the network society as ‘revolutionary’, ‘fundamental’, ‘unforeseen’, and ‘profound’, it is easy to forget that earlier technologies have not been linked to lesser challenges. What can be more fundamental than settling at one place after centuries of wandering? Or be more profound than the ability to record our thoughts for future generations? Nowadays, when computers have finally become the new normality, the excited narrative of information ‘revolution’ turns into a more moderate discourse based on dialectics between people, technologies and society situated within a grand historic continuum (i.e. Cuban & Jandrić, *in press*; Jandrić, Sinclair, & Macleod, *in press*).

The role of technologies in social change has many faces. For now, humankind has successfully avoided various kinds of techno-determinist utopias and dystopias—yet, technologies do profoundly shape our individual and collective behaviour (Feenberg, 2002). Whilst many amongst us refuse to buy fancy gadgets in order to keep up with the Joneses, social determinism still plays a significant part in shaping our usage of technologies. As we buy smartphones packed with features we do not need, uses determinism is obviously not the only game in town. On that basis, Lincoln Dahlberg (2004) argues that ‘to gain non-reductionist understandings of the Internet, research ideally needs to take into account the complex interplay between multiple constituting elements’.

Hunting and gathering as the main source of nutrients is inseparable from tribal societies, plough-based agriculture is inseparable from feudalism, and information and communication technologies are inseparable from global neoliberal capitalism. Yet, this historical coincidence should not be reduced to the determinist implication that computers cause the current social order. Instead, drawing on Marxist theory we are reminded that technology, like any commodity, has ‘value’ which also represents a quantity of human labour. Furthermore, Marx distinguished between ‘use value’ and ‘exchange value’ (Marx, 1867/2003). On the one hand, ‘use value’ relates to human social necessities a technology might fulfil in conjunction with a person’s labour. On the other hand, ‘exchange value’ is a value that takes the human labour involved for granted to realize a profit in an economic market. As new technologies are developed they can quickly become subordinated to narratives of exchange value, which in education continually distort and redirect our non-determinist efforts. It is therefore more appropriate to say that information and communication technologies actively co-create global neoliberal capitalism alongside various social forces such as ideology and economy, that find a fluid expression through language. In the conceptual framework of critical theory, therefore, technology is not an object, or a subject, but a dialectical process of material and

linguistic negotiation between competing social forces—in words of Andrew Feenberg, ‘technology is not a destiny but a scene of struggle’ (2002, p. 14).

It is within these circumstances that this article looks into the complex and multi-layered relationships between information and communication technology and the university. In her recent critical discourse analysis (CDA) of 2.5 million words of UK government policy and university strategy texts written between 1997 and 2012, Sarah Hayes has noticed an interesting phenomenon: in policy about human labour with technology for learning, the references to humanity have by and large disappeared. On that basis, she draws links ‘with a narrow and dominant language about educational technology, as always providing an “exchange value”’ (often expressed as profitable and guaranteed improvements) for learning. However, ‘to claim technology provides an exchange value is one thing, but to infer that technology actually performs our labour on our behalf, is quite another’ (Hayes, *in press*). As values of global neoliberal capitalism soak all aspects of contemporary scholarship, we question a techno-determinist ‘inevitability’ of such developments by asking: Who is really in charge of contemporary education?

We approach this question by blending three different, yet compatible and interlocking theoretical frameworks. Based on recent developments in digital postcolonialism (Jandrić & Kuzmanić, 2015), the first approach examines the relationships between contemporary university and information and communication technologies through the perspective of postcolonial theory and describes its identity using Homi Bhabha’s (1994) notion of hybridity. The second approach examines this relationship through Raymond Williams’s (2005) work on residual and emergent cultures, and the third approach looks into the same question using Deleuze and Guattari’s (2009) work on territorialization, de-territorialization and re-territorialization. By and large, the combination of the second and the third methodology has been inspired by the important work of Katarina Peović Vuković (2015). Using CDA, we move on to analyse in practice digital colonization (or territorialization) of the contemporary university by forces of global neoliberal capitalism through an absence of humans in policy discourse. Finally, we discuss our conclusions from CDA through the developed research framework, and use Paulo Freire’s (1972) work to point towards theoretical and practical opportunities for resistance.

The Hybrid Identity of the Contemporary University

Information and communication technologies are dialectically intertwined with the university. The first electronic message between two computers was exchanged between UCLA and Stanford—literally and metaphorically, the Internet was conceived in academic ethos of mid-twentieth century which includes openness, free sharing of information and horizontalism. Immediately after their release into the public arena, however, computers had been taken up by entrepreneurs who used them to create new capitalist empires. In a constant digital stream, information and communication technologies have poured from markets into the university as vehicles of ‘progress’—each time, their ideological baggage has moved one step closer to values of global neoliberal capitalism. In this way, they have perpetuated continuous technological and ideological reconstructions of social relations in all areas of human activity.

Petar Jandrić and Ana Kuzmanić (2015) describe that process using the metaphor of digital colonization, and show that human learning and technology mutually constitute a shared hybrid identity through a continuous process of negotiation between competing worldviews and ideologies. Using the work of Homi Bhabha (1994), they show that the process of hybridization is central to resistance as it enables disruption of the colonial exclusionary binary logic (technological optimism versus primitivism, ‘good’ versus ‘bad’ technologies, dystopia versus utopia). Digital postcolonialism ‘rejects common simplifications such as technological determinism and points to small power dis-balances as the main sites of resistance against the pairing of techno-education with global neo-liberal ideologies’ (Jandrić & Kuzmanić, 2015). In order to analyse these dis-balances, we first need to clearly identify its main stakeholders, and then analyse the inner workings of the conflict.

In *Base and Superstructure in Marxist Cultural Theory*, Raymond Williams starts from the recognition that social conflict happens through the process of complex negotiations between two large opposed economic and social groups: residual (traditional) and emergent (alternative and oppositional) (Williams, 2005, p. 40). Residual groups aim at maintaining the *status quo*, whilst emergent groups foster two main types of change: oppositional cultures want to improve residual models, whilst alternative cultures imagine radically different futures. Since the dawn of the age of the computer, the emergent culture of information and communication technologies has ‘attacked’ the residual culture of the university using both routes.

The first route is an oppositional emergent culture which consists of ‘improving’ the traditional university by incorporating opportunities offered by information and communication technologies. This route is extended through the language used in university strategy documents and government agendas which stresses only positive gain from the use of technology. In this way, it is safe to say that oppositional computer culture of the late twentieth century has become the new traditional culture of the first decades in the new millennium. What was once a route of diverse possibilities to enter new territories now has borders to direct us along only one path. Along the way, it has married the traditional university with the values and practices of global neoliberal capitalism and co-created its new hybrid identity. The second route, creating authentic alternative cultures, is also very prominent in the context of the university. Academic research is predominantly based on free/libre/open source software (Bezroukov, 1999), and academics throughout the globe fight dire struggles against commodification of the university. Peović Vuković (2015) shows several examples in the field of education where authentic alternative cultures have dominated over residual and oppositional models of production and transfer of knowledge: Wikipedia’s victory over Encarta, the Massive Open Online Courses (MOOCs). Therefore, alternative cultures also play a significant role in the hybrid identity of the contemporary university. In sum, the residual culture of pre-digital university has been transformed by oppositional and alternative emerging digital cultures to create the hybrid identity of the contemporary university.

Looking through the theoretical lens of Gilles Deleuze and Félix Guattari (2009), the conflict between oppositional and alternative emerging digital cultures can be described by three distinct processes: territorialization, de-territorialization and new territorialization. During the past few decades, the residual culture of the contemporary university has been territorialized by two competing forces. The first force, the oppositional emergent

culture of information and communication technologies, has strongly contributed to a transformation of the residual, pre-digital university, based on humanistic values into the for-profit, commodified university. The second force, the alternative emergent culture of information and communication technologies, has imagined radically new futures for the whole society, offering a vast spectrum of different ideologies often linked to the traditional ethos of the academe such as free sharing and horizontalism [Ivan Illich and his *Tools for Conviviality* (1973) is a good case in the point].

The oppositional emergent culture of information and communication technologies interlocked with global neoliberal capitalism has strongly territorialized the contemporary university. However, alternative emergent cultures such as Wikipedia and MOOCs have created spaces for subversion and de-territorialization by divorcing information and communication technologies from values and ideologies of global neoliberal capitalism. The net sum of these simultaneous processes represents a new territorialization. Sometimes, as in the case of ‘victory’ of open-source virtual learning environments (VLEs) such as Moodle over their proprietary counterparts such as Blackboard (Nozawa, 2011), the net sum works in favour of alternative emergent cultures. In other cases, such as the prosecution of Julien Assange, the net sum is clearly on the side of the oppositional emergent culture (Assange, Appelbaum, Müller-Maguhn, & Zimmermann, 2012). As the dynamics of conflict constantly moves back and forth, ‘it is impossible to predict outcomes of oppositional conflicts, or even guess whether resolution will arrive in the form of capitalistic appropriation or revolution’ (Peović Vuković, 2015). Though we would add that one powerful way we might at least notice oppositional conflicts in progress, is to closely analyse language. The patterns we observe provide another route to confront oppressive values and reopen negotiations to new territory, through a reflexive dialogue with classical and contemporary critical theory.

In the discussion so far, we have told the same story three times. In the first take, we described the advent of the contemporary university using the metaphor of digital colonization, and arrived at the conclusion that the process of cultural hybridization provides central opportunities for resistance. In the second take, we identified the main stakeholders, and outlined their roles in the hybrid identity of the contemporary university. Finally, in the third take, we described the mechanics of conflict between the stakeholders. At the first glance, this neat progression seems to work well because all three conceptual frameworks share the same roots in Marxism and critical theory. However, it is also subject to many restrictions. Digital postcolonialism is still a mere metaphor (Jandrić & Kuzmanić, 2015). Boundaries between oppositional and alternative cultures are often blurred, as in the case of the MOOCs (Peović Vuković, 2015). The sweeping narrative of territorialization(s) is very general, and needs careful translation into any particular context. In spite of shared theoretical backgrounds, the used conceptual frameworks are not fully commensurable. Therefore, now we shall move on to practice and employ CDA to explore the inner workings of discursive territorialization.

Linguistic Territories and Discursive Struggles

Finding routes to divorce our conceptions of information and communication technologies from distorted values and ideologies in global neoliberal capitalism is vital work. It requires persistence to interrupt a colonization of our technologies, which otherwise

become subordinated within policy discourse to serve only dominating, economically-linked social practices. Empty buzz phrases like ‘best practice’ and ‘the student experience’ stealthily invade our discursive territory in universities. They enact the ‘common simplifications such as technological determinism’ described by Jandrić and Kuzmanic’ (2015). Where once there was capacity for creative independent thought, our very language has created new borders. A misappropriation of ideas from a traditional academic ethos takes place through multi-layered forms of ‘marketization’. By multi-layered, we mean that the relationships between technology, human beings and society are complex and dialectically intertwined in the language we use to negotiate them. Language therefore is a ‘principal means’ (Mumby & Clair, 1997, p. 181) through which the social reality of our territorial encounters with technology in university is expressed. It is also a powerful means for governing bodies to literally take possession of spaces where we might once have resisted a domineering logic within academia.

Policy documents often circulate claims about improving the quality of learning through technology, but this becomes an oppressive discourse if it only perpetuates simplified ideologies. By discourse, we mean the human use of language in spoken or written texts as a social practice (Fairclough, 2007). Language, enacted as discourse, is an instantiation of what people believe, for example, their personal values related to technology and learning. Yet widely held conceptions persistently sever technology from people and the social, political and cultural relationships that brought it into existence in the first place. A ‘developer’s itch’ may bring a technology into being, but the human hand of development, the voice of aspiration and indeed acts of mis-appropriation do not leave the scene just because we claim in discourse that ‘the use of technology’ achieves only positive improvements.

In this section we argue that paying attention to *textual* interactions of discursive territorialization is an important route of resistance to a restricting neoliberal logic about information and communication technologies. Through CDA we reveal some common simplifications leading to technological determinism, as well as routes that could help redress these misconceptions. We highlight the essentially social nature of even (seemingly static) written policy texts in being able to reinforce and perpetuate myths about what technology can achieve on our behalf. We wish to stress though that this is not simply a negative argument. Here we might reflect that where there is interaction there is always the possibility of negotiation and routes to more emancipatory understandings. We do though identify a need to re-establish ourselves as humans in the discourse, for the sake of our labour and learning, so that we might reclaim territory that we are otherwise in danger of losing.

Political and economic agendas frequently make simplified claims in the name of technology, but these can disfigure and pervert the values of human learning communities. As examples later will demonstrate, we now frequently read statements like: ‘the use of technology will enhance the student learning experience’. Yet embodied within this statement is a simple economic calculation:

in exchange for the use of technology, there will be enhanced forms of learning.

This is quite a presupposition given that technology means different things to different people in different situations and cannot simply be assumed to have inherent positive qualities where learning is always enhanced. An instrumental approach is of course appealing.

Technologies are after all designed to provide solutions. This approach just keeps things simple. Yet, in so doing, it hides bigger critical questions about what really constitutes technology as part of our social and political structures, and what constitutes knowledge in human practice with technology. These are important questions for learning, and in response, we define technologies not simply as instruments to serve economic ends, but as sociotechnical systems, which do not operate in isolation from human labour, language, politics, or morality.

In Science and Technology Studies (STS) theory, technology, like language, is also never innocent or neutral (MacKenzie & Wajcman, 1999). On the contrary, it has powerful material implications for people that are unpredictable (Sørensen, 2009). A car is a technology but it requires knowledge to drive it. The human act of driving is subject to modes of organization such as roads, maps, sat navs and laws that uphold political values, via speed bumps, traffic lights, and penalty stickers for offences committed by drivers. Equally, through the Internet we may simulate the action of driving virtually, in a video game. Thus we argue technology is not only isolated objects, actual or virtual, but is also activities, laws, documents, knowledge, and any modes of organization enacted as sociotechnical systems (Matthewman, 2011, p. 12). This suggests when considering the concerns of Ellul (1964) and the emergence of a technological tyranny over humanity, we need to look at multiple permutations within neoliberal society where combinations of factors (including even our own language) drive out our human presence.

One way to analyse the territorialization of the contemporary university we have discussed is through a close scrutiny of policy discourse as it forms part of sociotechnical systems in higher education. Whilst there are many ways to approach such a study, the one we describe here is a corpus-based CDA. A corpus is a large collection of real instances of language use. This means the documents from UK policy for educational technology referred to here were written by many different human beings, in different contexts and at different times. It might therefore be anticipated that there would be considerable variation in styles of writing across the 15-year period scrutinized. Yet, as examples later show, there were surprising patterns of repetition.

The Inner Workings of Discursive Territorialization

In her ongoing critical analysis of political discourse related to higher education and information technologies, Sarah Hayes collected 2.5 million words of UK government policy and university strategy texts written between 1997 and 2012. This collection of naturally occurring language for analysis is called a ‘corpus’. Corpus linguistics (Baker, 2006) provides a principled way to search a corpus to examine constructions of language. It is important to note that these quantitative findings do not prove anything, or explain why certain patterns occur. Therefore more qualitative approaches through CDA can be later used to examine findings in relation to critical theory.

Sarah firstly applied software called *Wordsmith* to notice which quantitative patterns emerged through corpus linguistics. *Wordsmith* supports corpus linguistic analysis through *keywords* (Scott, 1997). Keywords are words that are statistically significant when measured against a comparison corpus, in this case, the British National Corpus. The British National Corpus was chosen because it contains 100 million words of

written and spoken English from a wide range of sources for comparison purposes. Table 1 shows some of the keywords that were highlighted and how often they appeared in concordance lines within the corpus.

A concordance illustrates how words and phrases are ordered alongside each other in their actual context of use. Through specific searches in *Wordsmith* Sarah was able to take a closer look at the words that appeared both before and after the keyword *use* and notice how values about *technology* for *learning* were expressed. Later she explains one interpretation that might be fruitful in arguing that we should reclaim our academic territory within educational technology policy texts. This is not simply because we are annoyed when our labour is reduced to ‘buzz phrases’, but more fundamentally because our human labour does not seem to be acknowledged at all. To explain, she began to notice the simple economic calculation mentioned earlier: *in exchange for the use of technology there will be enhanced forms of learning* was often repeated. The claims listed in the concordance lines later are from many different policy documents written at different points in time since 1997. All seem to follow a simple formula, which like a recipe suggests: by doing *this* you will achieve *this*. Even in this small section of corpus ‘the use of technology’ was anticipated to achieve a great deal:

- 5437 ‘the use of technology *to improve* teaching quality’
- 5441 ‘the use of technology *to enable* and support work-based learning’
- 5447 ‘the use of technology *to enhance* the student learning experience’
- 5448 ‘the use of technology *to enhance* learning, teaching and assessment’
- 5457 ‘the use of technology *to support and enhance* the business and management functions’
- 5485 ‘the use of technology *to enhance* assessment and the provision of feedback’
- 5504 ‘the use of technology *to enhance* learning, teaching and assessment’
- 5520 ‘the use of technology *to create, sustain and develop* reflective learning communities’
- 5522 ‘the use of technology *to promote* efficiency and effectiveness’
- 5523 ‘the use of technology *to overcome* problems, circumvent disability, or finding alternatives’
- 5547 ‘the use of technology *in meeting* the needs of a diverse student body’
- 5573 ‘the use of technology *can increase* accessibility and flexibility of learning’
- 5602 ‘the use of technology *to enhance* learning and teaching’
- 5638 ‘the use of technology *to enhance* the student learning experience regardless of location’
- 5659 ‘the use of technology *can increase* accessibility and flexibility of learning’

Table 1: Example keywords and how often they appeared in the corpus

Keyword	Number of instances
Learning	19260
Use	8131
Technology	6079

5660 ‘the use of technology *to create* digital archives to improve practice’

5661 ‘the use of technology *to enhance* front line productivity and management’

In these concordance lines Sarah has italicized phrases like *to improve*, *to enhance*, *to promote*, etc. These are verbs which describe active processes that are being undertaken. Using a form of CDA known as *transitivity* analysis (Halliday, 1994), she was able to label many grammatical patterns in the corpus. In *transitivity* analysis, verbs reveal different types of *processes*, and nouns tell us *who* or *what* is actually ‘doing’ these. There is not scope within this short article to explain in detail the specific linguistic forms of analysis undertaken. For more on Sarah’s particular methodology of corpus-based CDA applied to educational technology policy discourse, please see Hayes (*in press*) and Hayes and Bartholomew (2015).

Returning to consider how words are ordered in the concordance lines, the noun that undertakes all of the processes: *to improve*, *to enhance*, *to promote*, etc. is ‘the use of technology’. This is not a lecturer, student, administrator or manager. It is a textual construction that represents no human being. In linguistics, changing an active process of *using* technology into ‘the use of technology’ is called a ‘nominalization’ and it refers to a verb being changed into a noun. When we write in this way there are implications which may not be apparent to a reader at first. Taking as an example corpus line 5485:

the use of technology *to enhance* assessment and the provision of feedback
could be rewritten as:

Sarah *is using* technology *to enhance* assessment and the provision of feedback for her students

In this alternative way of stating what is going on you will notice that ‘Sarah’ is the noun. She is a named person undertaking the processes expressed in italics: *is using* and *to enhance*.

The writer of corpus line 5485 has replaced active human labour (where Sarah was using technology) with a static construction (the use of technology) that now acts on Sarah’s behalf. This is a common pattern identified in the large quantity of analysed educational technology policy documents. Human agency was repeatedly delegated to objects (expressed as nouns) rather than to people. Here you may ask, so what? Does this actually matter when so many documents are written up in this way? Isn’t it simply a form of shorthand? Perhaps to ponder this further we might examine a little more context around corpus line 5485 to see what this tells us:

the use of technology to enhance assessment and the provision of feedback by identifying and promoting evidence-based practice

Still we find no reference to human beings. Not only is the noun: ‘the use of technology’ credited with the act of enhancing assessment and the provision of feedback, it is to do this by: ‘identifying and promoting evidence-based practice’. How exactly does ‘the use of technology’ go about *identifying* and *promoting* our human practice? Indeed *whose* evidence-based practice, as this is also not stated? How is ‘evidence-based practice’ to be

defined? Given that technology does not speak, think or create anything without the aid of human programmers, in our policy language we seem to attribute to it considerable powers of discrimination, to determine things on our behalf, that at the same time disempower us. Later, as a further example some broader context around corpus line 5457 is provided:

the use of technology *to support and enhance* the business and management functions of educational institutions. Employed effectively it can lead to greater efficiency

So not in relation to teaching now, but concerning ‘business and management functions’ of the university, here we find the ‘the use of technology’ when employed effectively leading to greater efficiency. Even if this is true, we still find no mention of the human beings that labour to enable such a deployment. We are left to imagine what constitutes effective employment of the use of technology, what is deemed to be greater efficiency and indeed greater than what?

Turning to theory from Marx, the implications we might draw is that technology is repeatedly imbued with an ‘exchange value’ (Marx, 1867/2003) where we are told we will gain something profitable in return. As mentioned earlier, Marx distinguishes between ‘use value’ and ‘exchange value’. On the one hand, ‘use value’ relates to human social necessities that people labour for. On the other hand, ‘exchange value’ is a value that takes the human labour involved for granted, to realize some form of enhancement in an economic market. Policy discourse that seeks only ‘exchange value’ provides a means for political economic agendas to make simplified claims in the name of technology, which can, according to Greener and Perriton (2005), distort the values of human learning communities. However, to claim technology provides an exchange value is one thing, but to repeatedly infer that technology actually performs our labour on our behalf, is quite another. This dis-empowers us as humans and closes many routes for learning. We need therefore to first identify the discourses that diminish human presence. In this way we can expose the problem and make small power dis-balances as sites of resistance. Then we need to seek paths to reinvigorate the central position of human beings in regards to information and communication technologies. One of these is simply to write ourselves back into the policy! As in the examples earlier, where we find we are writing about ‘the use of technology’ perhaps we take a little more time to name the humans involved. Within the framework of critical theory, we can seek theoretical and also practical opportunities of this kind for raising critical consciousness which allows exposure of such contradictions inherent to the relationships between technologies and the university.

The role of Humans In, Against and Beyond the Neoliberal University

Where language is concerned, the identified contradiction requires two important choices from us as educators. Firstly, we need to seek ways to input into policy using honest language that accounts for human labour and not simply allow university strategies to emerge as things we only react to. Secondly, related to the first point, we will then be in a better position to disrupt a flow of text that spreads a key myth about technology. This is the deeply held historical belief that human beings can control and manipulate technology to bring about only positive results. This fabrication that technology is a

‘neutral’ tool to harness and use to make improvements de-humanizes our relationships with technology within language.

Furthermore, the question of whether new technologies (including VLEs and related systems now widely adopted in contemporary universities) actually *enhance* effectiveness of education was always in doubt, even as new systems emerged (Dillenbourg, Schneider, & Synteta, 2002). Technologies may enable much, but they also always bring other effects that reconstitute social relations, just as social relations reconstitute technology.

The history of educational technology shows that every new technology (television, computers, hypertexts, multimedia, Internet, virtual reality, ...) raise a wave of naive expectations regarding to the intrinsic effects of these technologies. (Dillenbourg *et al.*, 2002, p. 11)

Given the examples we have discussed from the corpus and with reference to the concept of hegemony (Gramsci, 1971), it is not hard to see how a neoliberal approach towards economic growth might repeatedly colonize naive expectations of technological systems within rhetoric of flexible, entrepreneurial and performance-driven goals for higher education. Authors of policy documents tell people things for a purpose to influence their attitudes or behaviour in terms of performance (Thompson, 2004, p. 45). However, people are of course not completely constrained by discourse, which, as it manifests in social practice in universities, may be opposed in different ways.

De-colonization, Alternative Cultures, De-territorialization

We proceed now to suggest how humans might win back territory for critical argument that acknowledges our labour in, against and to look beyond the neoliberal university. Digital postcolonialism describes power dynamics within the digital network society. Conceived in the framework of critical theory, however, it is far from a passive description—instead, it actively engages in social reality and aims at decolonization of our techno-educational practices. Recently, Jandrić and Kuzmanić (2015) have applied three phases of decolonization developed by Frantz Fanon (2001) to the general relationship between education and digital technology. In the following discussion, we shall expand their argument to the position of humans in the neoliberal university. The three main phases of decolonization, identified in Frantz Fanon’s book *The Wretched of the Earth* (2001), are: recognition, historicization, and active resistance.

In the phase of recognition, ‘the native intellectual gives proof that he has assimilated the culture of the occupying power’ (Fanon, 2001, p. 166). This assimilation simultaneously happens in three main dimensions: non-group (or individual) domination, intergroup domination and intragroup domination (Horvath, 1972, pp. 46–47). Using two important concepts by Paulo Freire (1972), in the non-group dimension we literally need to read the world through reading the word and develop critical consciousness about the lack of human agency in policy discourse and its consequences. In the intergroup dimension, our analysis of the lack of human agency must be expanded to various levels from national and international regulation to inter-institutional competition which clearly leads to further commodification of the university. In the intragroup dimension, the remaining dimensions are being translated into various policy documents which define important

aspects of university life from relationships between teachers and students to scenarios for future development. In CDA, Sarah analysed the lack of human agency predominantly in the intergroup dimension. However, Fanon (2001) makes it clear that only the full recognition of colonial relationships (in our case, the lack of people in higher education policy discourse) provides an adequate background for further decolonization. Once our research focus has been set in the right direction, it is easy to extrapolate the found conclusions to various dimensions, levels and contexts. Perhaps, now, CDA could be used to ‘probe’ our extrapolations at various dimensions and levels in order to ensure correctness of this reasoning.

Andrew Feenberg shows that contemporary social hegemony ‘does not rest on a particular technique of social control but more fundamentally on the technical reconstruction of the entire field of social relations within which it operates’ (2002, p. 183). The second stage of decolonization, historicization, does an important job of situating fragmented individual efforts into a wider context and enabling critical emancipation. Dating from the Middle Ages, the institution of the university has been subject to various masters and ideologies: some of its incarnations include church institutions based on religious principles, elite establishments aimed at serving the rich and the powerful, institutions aimed at developing and preserving national identities, mechanical institutes aimed at training foremen, institutions oriented towards promotion of social equality and human rights. Furthermore, many of these incarnations have existed simultaneously. Nowadays, when we speak of preserving academic freedoms and commodification of the ‘traditional’ university, we typically take university in Europe and the United States of the 1950s and 1960s as the golden standard of free, accessible, emancipatory education (see, for instance, Giroux, 1992). From a historical perspective, therefore, our choice of what is ‘traditional’ is fairly arbitrary.

This argument can be used to dismiss quite a few calls against modernization. Why did we decide that this was the best period in the long history of the university? Why would we not instead reach into late 1800s and early 1900s, and recreate elite institutions for the rich? However, this argument cannot be applied to the question who is in charge of contemporary education, as the network society is the first era in human history that witnesses active, if unconscious, efforts on removing human beings from educational praxis. This question is not just political, or economic, or even technological (although, as clearly shown in our analysis, it contains a good measure of all these elements). Instead, it reaches all the way to the nature of human education, and to the question whether machines can be entrusted with such an important task. Considering the question of human nature in the age of the computer, this line of argument lands into various postmodern concepts and approaches such as Donna Haraway’s (1991) cyborgs. As this question reaches far beyond the scope of this article, we shall acknowledge the need to examine epistemological and identity issues and move on with our analysis.

In the third phase, we arrive to active resistance. Here, it is important to make a clear distinction between two different approaches: reconciliatory postcolonialism and revolutionary postcolonialism. Reconciliatory postcolonialism is based on postmodernism, and aims and invokes the more or less techno-determinist feeling of triumph of modernity. Revolutionary postcolonialism, in contrast, is based in Marxism, and aims at deep social change (During, 2000). Postmodernist concepts and approaches, from Homi Bhabha’s

(1994) hybridity to Donna Haraway's (1991) cyborgs, can indeed offer a lot to the question who is in charge in contemporary education. However, it is only through clear identification of stakeholders, and through clear understanding of power dynamics between the involved social groups, that we can develop feasible strategies for resistance. In words of Peter McLaren, our study therefore requires

a move away from the ironic distantiation and self-indulgent detachment of the vulgar divas of the academia who clearly chose identity politics over class politics (and in doing so became complicitous in the very relations of inequality they officially rejected) by a close reading of Marx and Marxist theorists, culminating with engaging the work of Marxist educators. (McLaren & Jandrić, 2014, p. 806)

Williams's (2005) neo-Marxist insights into the power dynamics between residual and emergent cultures provide a much more nuanced framework than Durning's (2000) brief outline of reconciliatory and revolutionary postcolonialism. Here, traditional university based on human agency is a residual culture, which slowly but surely gives way to oppositional and alternative cultures. As shown in our analysis, stripping policy discourse of human agency does not represent a true alternative to the current university. Instead, it is a true (and fairly successful) oppositional culture, as it functions in service of power transfer from one group (academics, researchers, scientists) to another (managers, administration, the marketplace). In this conflict, as shown previously, we need to join the struggle on the side of traditional universities' residual culture, and aim to reinvigorate the central position of human labour.

However, this conclusion should be refined further, as there are various kinds of human labour. Academics are researchers and creators, who produce new ideas and concepts. We are also teachers, and often take up various roles such as friends, counsellors, and advisors. We are administrators, who spend huge amount of (almost) useless toil on filling spreadsheets with 'quality assessment reports' and similar documents. Last but not least we are policy-makers, and strategy-makers, who define what it means to study at our institution and, by extension, in the contemporary society. The majority of academics need to carefully balance the aforementioned tasks. Some of them work well with each other (such as researchers and advisors) while others are clearly in conflict (such as teachers and administrators). Obviously, computers cannot take up many of these roles—for instance, they cannot be friends, counsellors, creative researchers. Therefore, information and communication technologies do not really make humans obsolete. The reality is much darker—omitting humans from policy discourse transforms the nature of our work, and re-creates it in a more machine-like, administrative fashion. Thus, we arrive to the question: is it really worthwhile to struggle over dehumanizing administrative toil?

This invokes the dark overtones of Jacques Ellul's (1964) concept of technique as the means of social control. Using the familiar language of postcolonialism, omitting humans from policy discourse creates a new, hybrid identity of the university by transferring power from teachers and scientists to managers and administrators, and transforms the nature of academic employment from *laissez faire* approaches towards standardization. In this way, it arrives directly to Herbert Marcuse's (1964) one-dimensionality and other dystopian critiques of technology characteristic for Frankfurt School of Social Science. As

a totalitarian discourse, the omission of humans from policy documents can be rejected using well-known arguments against technological determinism (see, for instance, Feenberg, 2002). Using Williams's (2005) notions of residual and emergent cultures, therefore, we historicized the discourse identified in our critical analysis and linked it with the existing body of knowledge.

Finally, the concept of territorialization is particularly useful for further development of the phase of active resistance. Our CDA shows that policy discourse in higher education has been territorialized by the lack of human agency, and that such territorialization benefits certain populations (such as managers and administrators) over others (such as teachers and researchers). Here, we are not fighting a lost Luddite battle against information and communication technologies (as assumed by various techno-determinist positions). Instead, we are (again) facing a class struggle. In this struggle, public resources such as the university have been appropriated by capitalist market forces. The language of inevitability, constantly utilized by those in power, merely serves to reinforce the existing power relationships. The omission of humans from policy discourse, therefore, is a territorialization strategy which revokes our techno-determinist instincts, thus lulling us into the feeling that there is nothing we can do about it. However, the story of dehumanizing toil that can easily be replaced by machines is clearly another false assumption in the repertoire of the oppressor, the cuckoo's egg aimed at obscuring the underlying class struggle by the narrative of 'natural' nature of power transfer.

In the best tradition of self-censorship, a decent amount of analysed policy documents has actually been written by academics. In this way, we have (almost sub-consciously) been digging the grave of our own profession. The first step towards de-territorialization of discourse lies with the very people who write university's policy documents—the academics. As far as information and communication technologies are concerned, the majority of academics subscribe to various determinisms (Fejes & Nicoll, 2008; Dahlberg, 2004). This is not a conscious decision—for an average academic, the dominating discourse about technologies 'driving' social (and, in turn, educational) change creates a deadly tempo that simply does not allow enough time for reflection (Hayes, *in press*). Yet to fail to reflect on this dilemma contributes to a rapid de-humanization of learning and academic life. Political engagement may take time we feel we no longer have, but still we must confront the conspirators that, in partnership with time, 'accelerate our social engagements with technology in the context of learning' (Hayes, *in press*) and in so doing, remove us from the scene altogether.

At least for a while, however, the 'third generation' of Frankfurt School thinkers such as Andrew Feenberg (2002) have rejected technological determinism as dystopian, non-realistic, and simply wrong—and they replaced it with much more nuanced views to human agency. At the field of philosophy, the struggle against omission of people from policy discourse is won—now, it needs to gain momentum in the wider (academic) community.

This brings us again to two important concepts pioneered by Paulo Freire: reading of the wor(l)d, and conscientizacao. In the capacity of teachers, it is our job to read the word and help others read the world. In the capacity of researchers, it is our job to read the world and describe it using the word. As critical pedagogues, it is our job to link reading of the word and reading of the world in order to help students understand own position and agency within the techno-social reality. As reflective practitioners, we first need to do the same

thing in our back yard—and this brings us to the need to develop own critical consciousness about human relationships to information and communication technologies. In a Freirean universe, de-territorialization through reading of the wor(l)d and conscientizacão is an ongoing process. With the advent of new territorializations, the process of de-territorialization needs to adjust to changed circumstances.

These processes are theoretical, because they require constant questioning of our relationships to information and communication technologies. They are also practical, because of active roles of academics. In this way, we arrive to two more concepts developed by Paulo Freire (1972). First, our relationships to information and communication technologies can be described by processes of codification and decodification, where each new iteration updates our understanding of the techno-social reality. Second, the position of academics in this process is the one of true critical praxis, as it implies both scientific inquiry and active political engagement. While further development of this argument clearly lies beyond the scope of this article, Freire's (1972) ideas obviously arise stronger than ever in the context of the network society.

Towards a Human Identity of the Contemporary University

We live in a complex world. Our relationships with information and communication technologies have substantially transformed many traditional occupations, and higher education is hardly an exception. However, the academia plays a very important role in the society, as it has the power to reproduce and/or challenge the existing power relationships. While poor textile workers from Western European factories could not do much against outsourcing of their labour to places where people are happy to weave at one dollar per day, universities have actively co-created the global technological universe—and they have the power to change it. The paralysing techno-determinist discourse which implies that our future has been transferred into the 'hands' of the machines simply does not hold water. Instead, the omission of humans from higher education policy discourse is just one more attempt of global neoliberal capitalism to find its way into a very important part of our commons—education of future generations. Because of its hidden nature, this attempt is even more dangerous than direct attacks such as budget cuts. However, it is our duty, as humanists and scientists, to see through hegemonic strategies and bring critical emancipation—for the beginning, by raising critical consciousness about the underlying power relationships obscured by totalizing postmodernist and techno-determinist discourses.

We approached the research question using two main strategies. In practice, the main argument in this article—that humans have been sweepingly removed from higher education policy discourse—has arrived from the ongoing project of CDA conducted by Sarah Hayes. This article represents only a small fraction of Sarah's important work, and should be placed in its wider context (Hayes, *in press*; Hayes & Bartholomew, 2015). In theory, we analysed practical results using a wide range of neo-Marxist approaches from postcolonialism to critical pedagogy. While we are aware of some tensions within the diverse body of employed theories, it is their shared theoretical foundation that allows such collaboration. Moving on to decolonizing (or de-territorializing) practices, this article has responded to Peter McLaren's assertion that

the globalization of capital, the move toward post-Fordist economic arrangements of flexible specialization, and the consolidation of neoliberal educational policies demand not only a vigorous and ongoing engagement with Freire's work, but also a reinvention of Freire in the context of current debates over information technologies and learning, global economic restructuring, and the effort to develop new modes of revolutionary struggle. (McLaren, 2000, p. 15)

As we employed Freire's (1972) important body of work to re-territorialize the policy discourse of higher education, it has become obvious that the main concepts in critical pedagogy cannot be over-ridden by totalizing techno-determinist discourses, and that, in the age of information, Freire's (1972) work is more needed than ever. This conclusion is merely a point of departure, which we aim to develop and refine in our future research.

In the tradition of critical pedagogy, we take an active position within this research. As scholars interested in the relationships between education and information and communication technologies, professionally and privately, we understand that our field might not be interesting to everyone. However, the disappearance of humans from policy discourse does influence everyone working in higher education, and, by extension, continuation of such policy discourse might influence the whole society. On that basis, we can paraphrase the old saying and conclude that academics can ignore information and communication technologies, but information and communication technologies will never ignore academics. This places the relationships between education and technologies in the same plane with other generic issues such as climate change—and we do hope that this article will contribute to providing it with adequate attention and care.

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